IAEG SDGs WG GI, 12-14.12.2016, Mexico City

UN-GGIM:Europe's perspective and activities to support better integration of geospatial information and statistics and the UN SDG monitoring

Pier-Giorgio Zaccheddu, "International affairs" @ BKG

UN-GGIM EUROPE | UNITED NATIONS COMMITEE OF EXPERTS ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

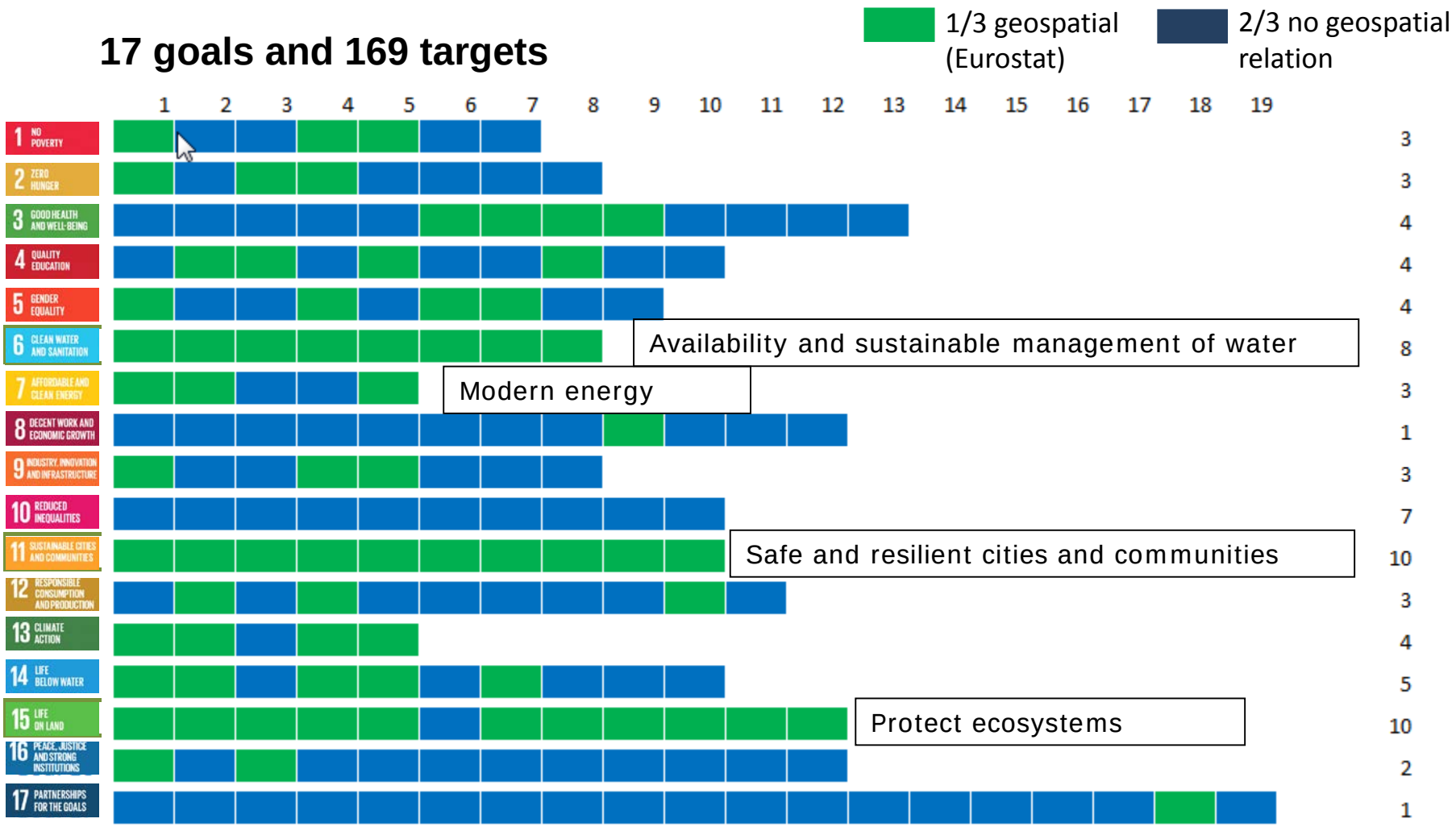
SUSTAINABLE DEVELOPMENT GOALS

Content

- From the global to the regional (European) perspective
- Why UN-GGIM:Europe matters
  - WG Core Data activities
  - WG Data Integration activities
  - WG Data Integration support of the SDG monitoring
  - Best-practice activities of BKG
- From the global to the national (German) perspective

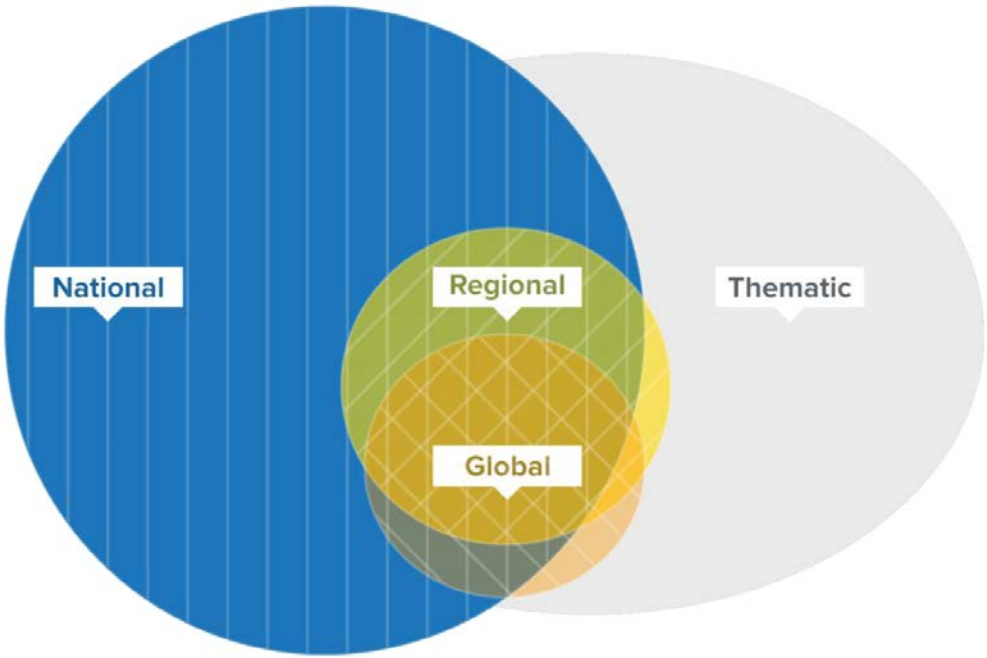
SUSTAINABLE DEVELOPMENT GOALS

17 goals and 169 targets



Source: Eurostat

Global SDG monitoring



- Each target (169) shall be measured → at least 1 indicator/target
- Global indicators to be measured by all Members States
- Additionally regional and national indicators
- Predominantly taken from official data
- Status: # 231 indicators

Challenges for the SDG monitoring and reporting

Competition of different actors
concerning the definition of methods, coordination

Competition of different analysis levels
global vs. national vs. regional

Competition of available geospatial data
remote sensing data vs. In-situ (geospatial reference vs. thematic)

Competition of different analysis methods
for different resolution levels / scales

Information exchange and coordination needed
between organisations, working groups (national, European)

Geospatial data can support the indicator measurement

SUSTAINABLE DEVELOPMENT GOALS

Indicator 2.4.1:	Percentage of agricultural area under sustainable agricultural practices **Denominator**: Agricultural Area = sum of arable land + permanent crops + permanent meadows and pastures (FAOSTAT) **Numerator**: Land areas under productive and sustainable agricultural practices are those where indicators selected across the environmental, economic and social dimensions reach certain predefined values

Indicator 6.5.2:	Proportion of transboundary basin area with an operational arrangement for water cooperation
Indicator 6.6.1:	Change in the extent of water-related ecosystems over time

Indicator 15.1.1:	Forest area as a proportion of total land area
Indicator 15.3.1:	Proportion of land that is degraded over total land area
Indicator 15.4.2:	Mountain Green Cover Index

http://spaceflightnow.com/soyuz/vs07/images/
http://www.d-copernicus.de/

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UN-GGIM: Europe – Work Plan 2015-2018

The substantial part of the proposed Work Plan for 2015 – 2018 is the continuation of the Plan adopted in 2015:

Work Group A: Core Data

1. Specifications of core data (*End of 2016*)
2. Economic model for production & distribution of core data (*End 2017*)
3. Existing political & financial frameworks supporting core data availability (*Mid-2018*)

Work Group B: Data Integration

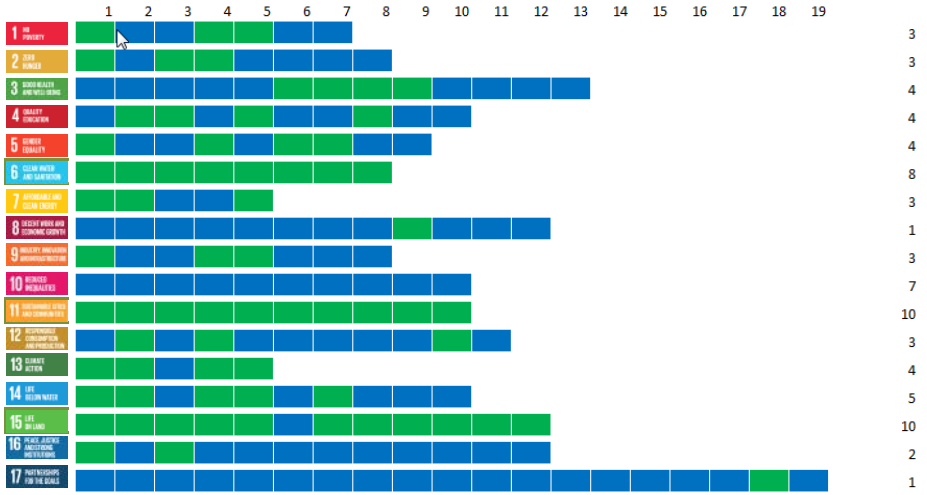
1. Definition of the priority user needs for data combinations (*accomplished*)
2. Recommendation for implementing prioritized combinations of data (*Mid-2016*)
   → To be completed in December 2016/January 2017
3. Recommendation how to manage side-effects induced by data combinations (*accomplished*)

Plus additional focus on new work areas: *topics and agenda items emerging from GGIM 5:*
→ *(1) EGRF, (2) Focus on SDGs, (3) Support of LandAdmin, (4) Global Fundamental Data*

WG A “Core Data” approach

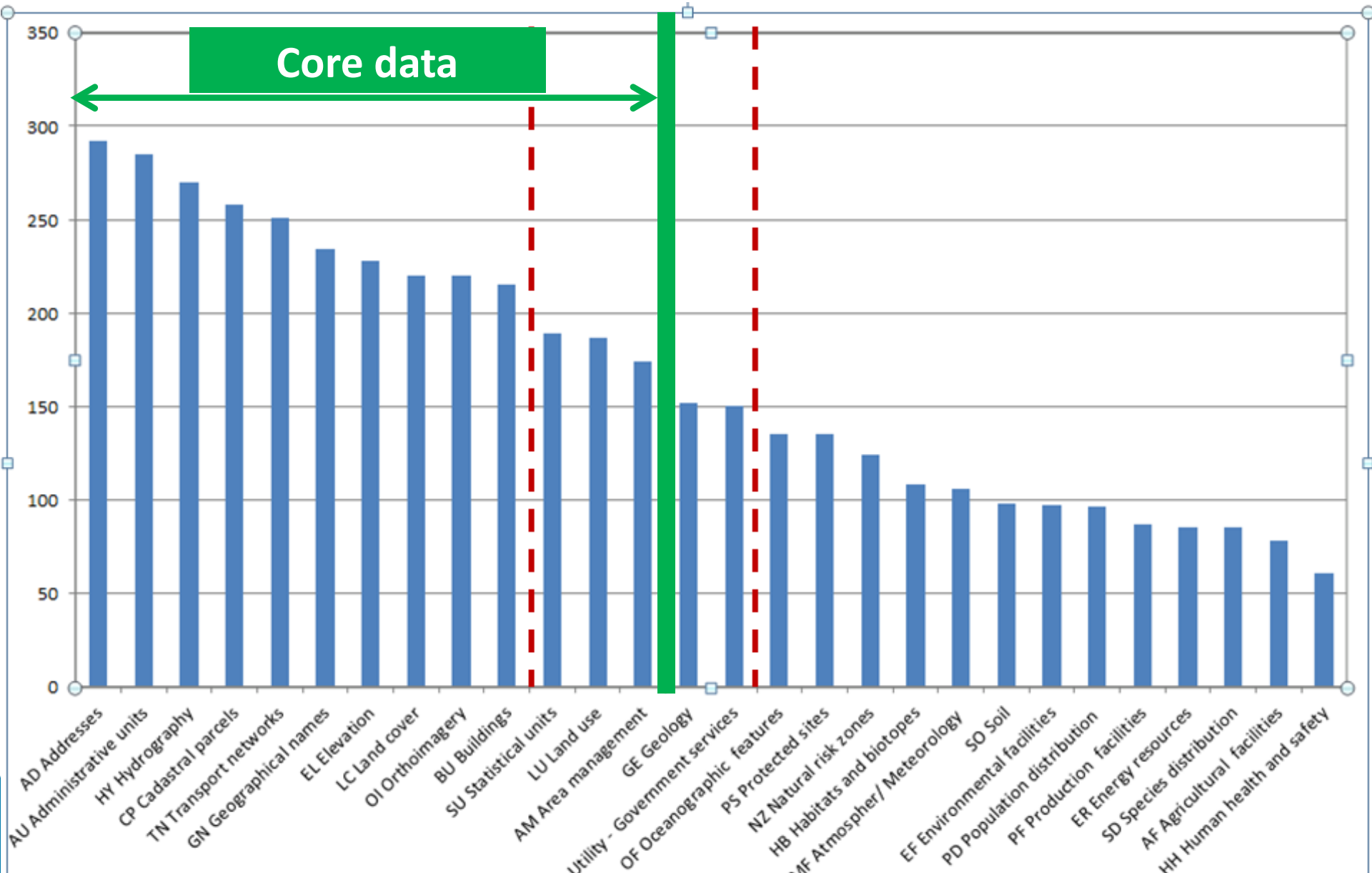
- Sustainable Development Goals (SDGs)
  - Identify the targets consuming “geospatial information”

Eurostat selection very close to WG A one



  - Identify the actions enabling to reach these targets
  - Identify the required data
  - Make summary by « use case maps » for each theme

WG A “Core Data” themes selection



Further information about UN-GGIM: Europe WG A “Core Data” – Website

http://un-ggim-europe.org/content/wg-a-core-data

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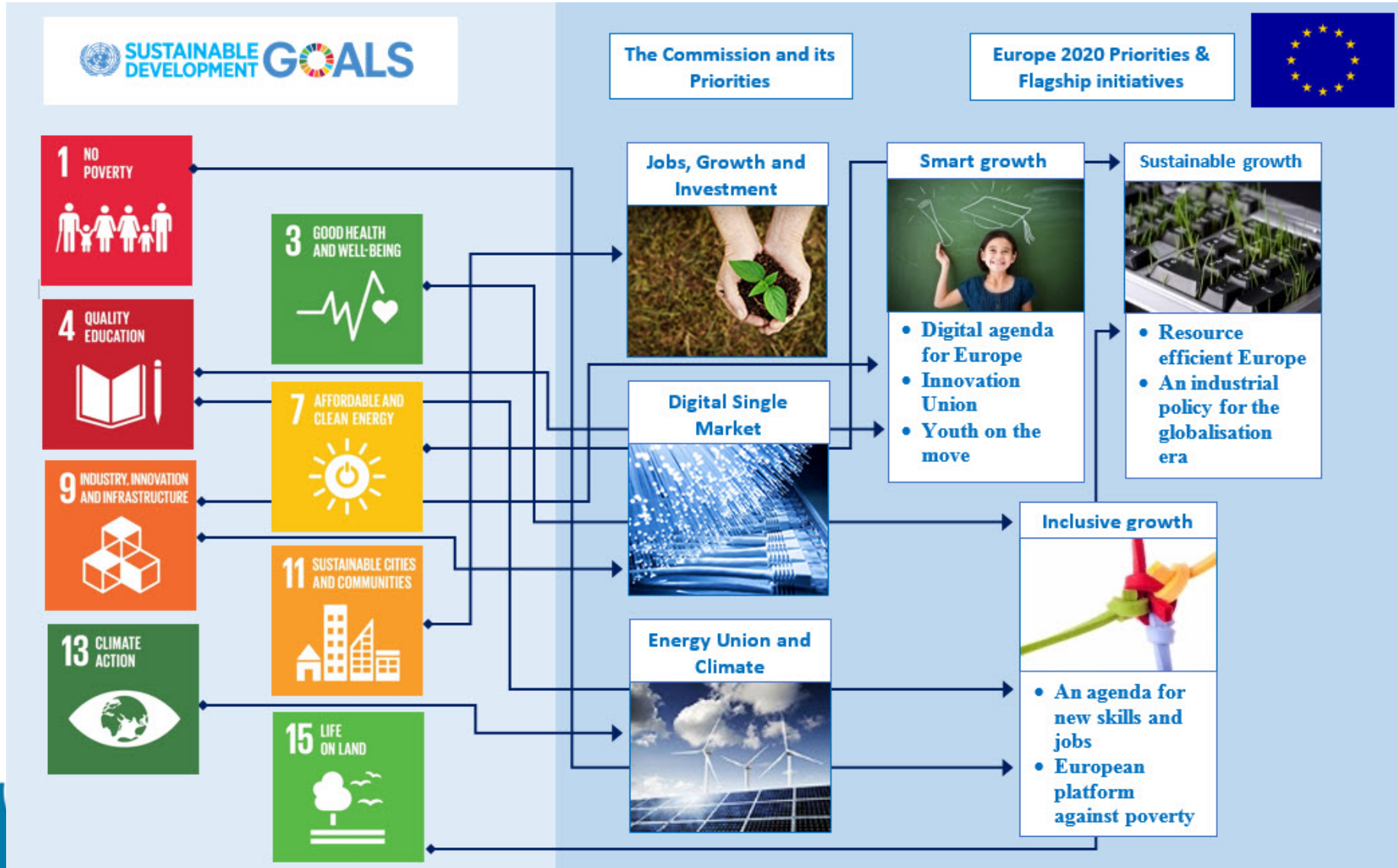
Report B1: “priority user needs ” accomplished mid-2015

- Definition of the priority user needs for combinations of data (Mid-2015).

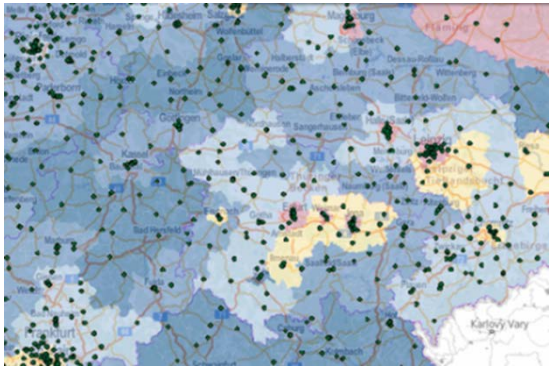
  Title: “Definition of priority user needs for combinations of data”

- Collect policy relevant use cases, focus on evidence based decision making
- Elaborate use cases → derive user needs → recommendations
- 40+ Use cases were collected
- 5 Recommendations
- Report uploaded on the UN-GGIM: Europe website

Report B1: “priority user needs”
…there are a lot of policies in Europe…



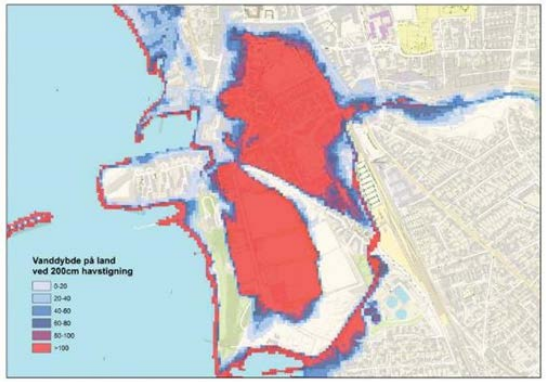
Report B1: “priority user needs” – National use cases

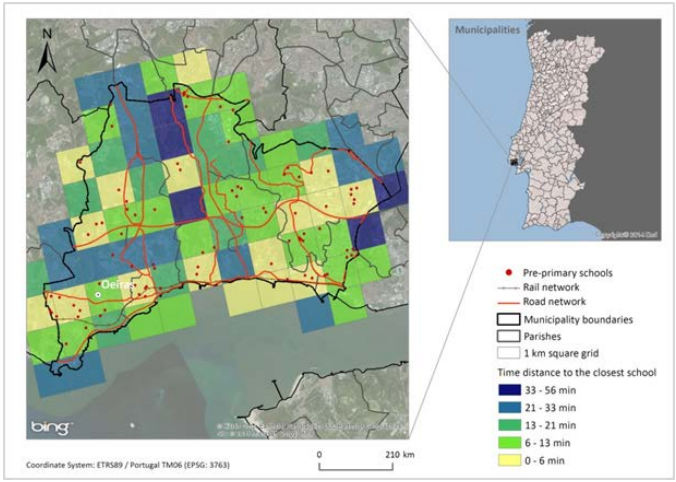


DE-examples from the geoportal www.geoportal.de:

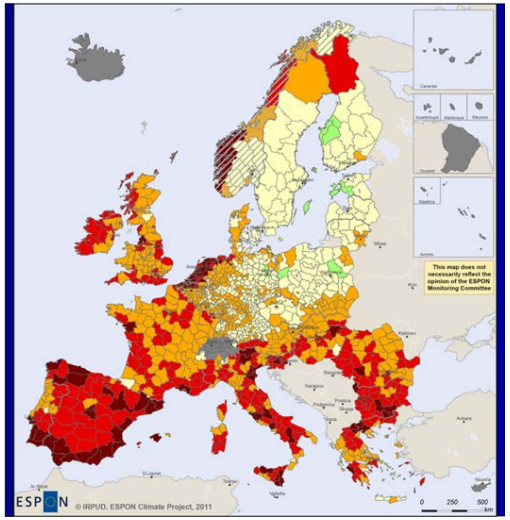
1. Wind Power
2. Flood protection
3. Future development of the school population
4. Accessibility of Central Locations

Albania
Germany
Denmark
Spain
Italy
Poland
Portugal
Sweden
Turkey
United Kingdom





Report B1: “priority user needs” – Cross-border use cases



Examples:

1. NL – Fighting international organised crime
2. ESPON – Availability of secondary schools
3. […]

DG REGIO (EU-COM)

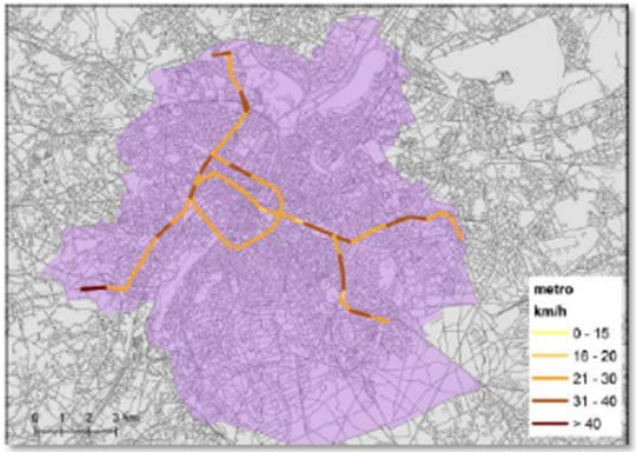
Netherlands

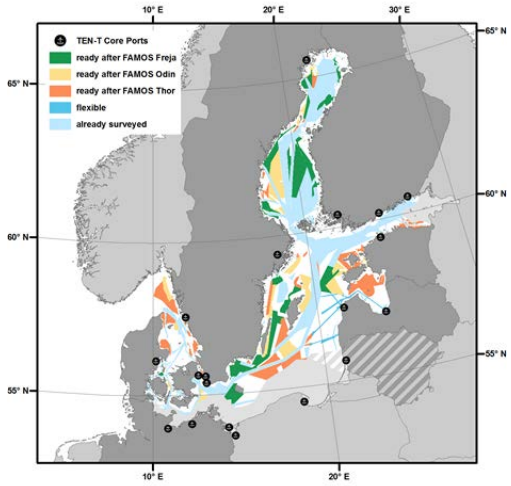
Sweden

ESPON

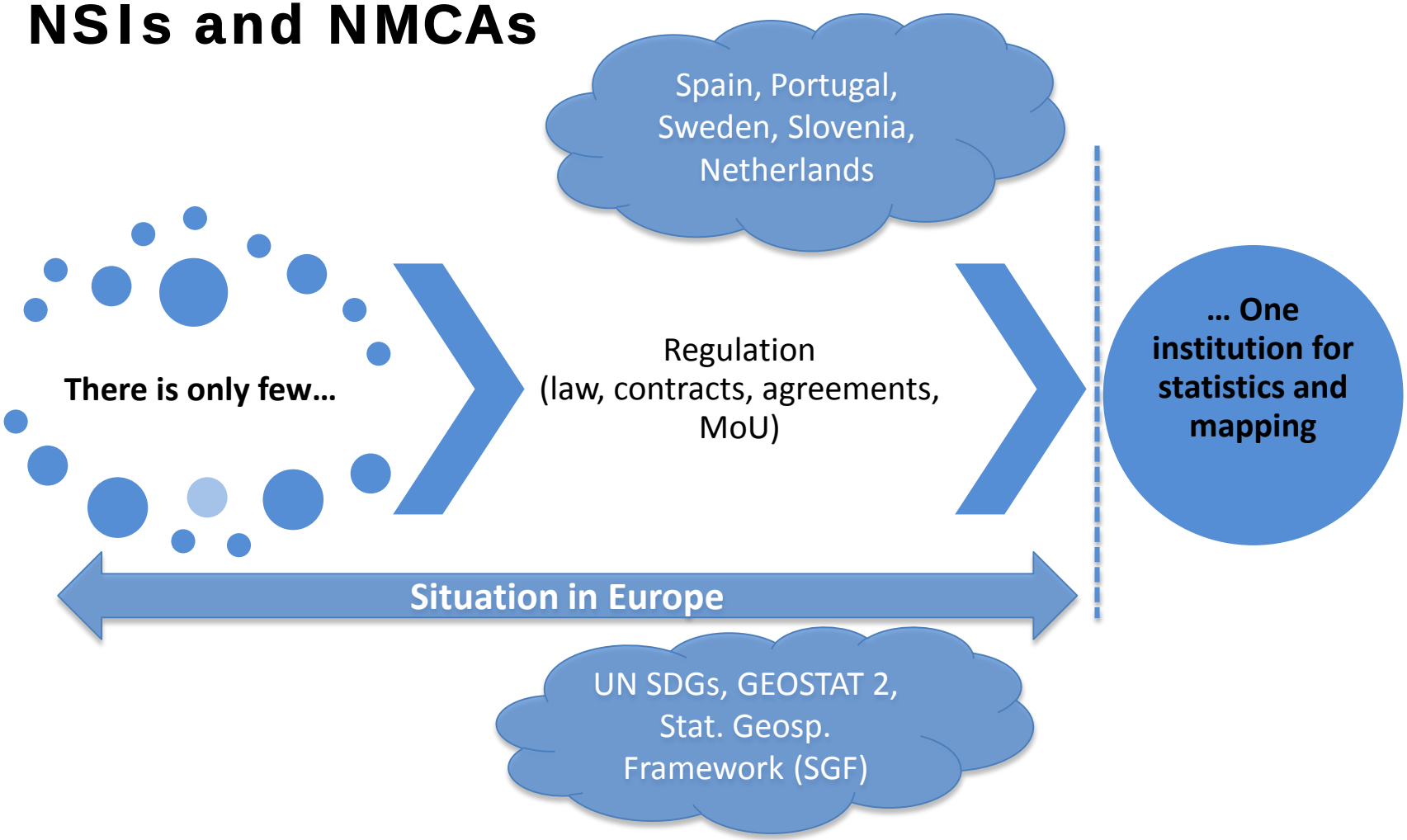
GEOSTAT 1B (Eurostat)

European Court of Auditors and European Commission



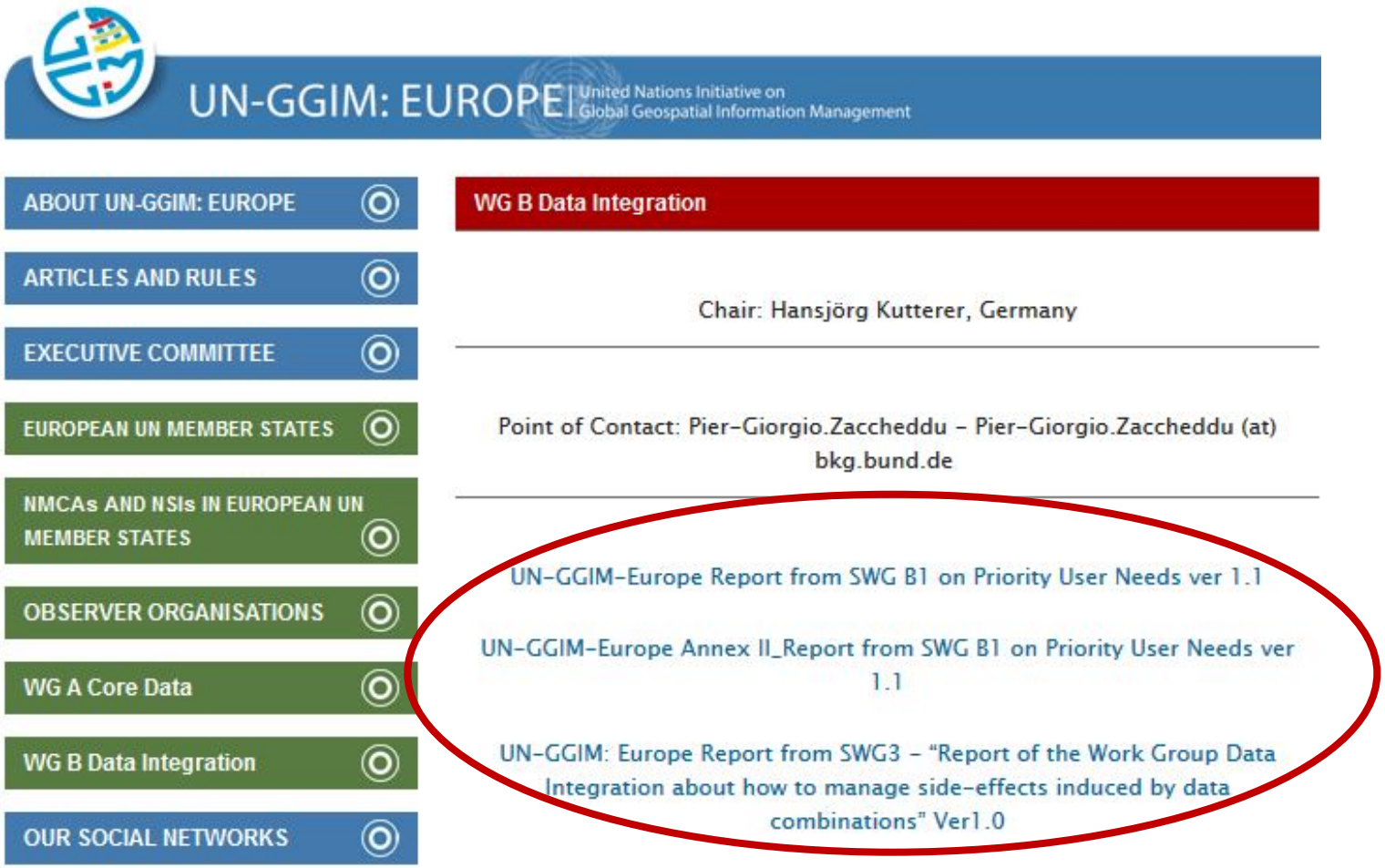


Report B2: “methods” – Interaction between NSIs and NMCAs



→ Recommendations for improving the interaction

Further information about UN-GGIM: Europe WG „Data Integration“ – Website



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→ **Follow-up work plan 2017 – 2020:** *"As a European contribution to the global process on developing a framework for monitoring UN SDG indicators, UN-GGIM: Europe will through the WG on "Data Integration", ensure a two-way interaction with the IAEG-SDG Working Group on Geospatial Information."*

UN structure for the SDG monitoring

global

Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG SDGs)

- provide a proposal of a global indicator framework (and associated global and universal indicators)”

IAEG SDGs Working Group on „Geographic Information“ (IAEG SDG WG GI)

- advance the understanding and the role of geospatial information in contributing to the indicator framework

regional

UN-GGIM:Europe Work Group „Data Integration“

- Contribute to the global process and ensure a two-way-interaction with the IAEG SDG WG GI

Support of „Task Team UN-GGIM“ for IAEG SDG (led by DK) 2016

2030 Agenda - Sustainable Development Goals
Geospatial components for Indicators

Goal:
Target:
Indicator:

Definition of the indicator: (State the definition of the indicat

Indicator disaggregation: (List the indicator disaggregation b disability, geographic location and other characteristics relevant implementation of the SDGs).

Current suggested use of geospatial data for the indicat by the existing metadata – the "as-is" situation).

Suggested geospatial data integration

GAP analysis: (Describe what changes in use of data and appl suggested/current procedure for monitoring the indicator, to a fu requirements - going from the "as-is" situation in the present me

List required geospatial data: (Develop a list from the GAP themes which are required to support the to-be situation).

Data quality requirements: (List in general terms the require relevant parameters: Resolution, completeness, logical consiste certain international standards should be followed. Data quality resolution and disaggregation).

Data availability: (List the data availability: 1) geographically: countries), 2) Source: Accessible through services or download, or are there restriction on use).

Data collection (Describe how the geospatial data for the indi overcome – are there many sources to collect from, do they nee

Data interpretation: (Describe which analysis, procedures ar needed to support the reporting requirements ("to-be" situation))

Method of integration: (Describe how the geospatial data are envisaged to be integrated in the monitoring cycles).

Target	Indicator	Addresses	Administrative units	Built-up area polygons	Cadastral parcels	Geographical names	Habitats and biotopes	Transport networks	.....
Goal 1 End poverty in all its forms everywhere									
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	1.1.1 Proportion of population below the international poverty line, by sex, age , employment status and geographical location (urban/rural)	X							
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation									
9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.1 Proportion of the rural population who live within 2 km of an all-season road		X					X	
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable									
11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities		X	X					

Using INSPIRE framework and structures…

Tasks assigned to IAEG SDG WG GI supported by the UN-GGIM:Europe WG Data Integration 2016-2017

- Review the agreed global indicators through a 'geographic location' lens;
- Review the "metadata" compiled for the global indicators through a 'geographic location' lens;
- Consider and review the tier classifications for the agreed global indicator, their level of "maturity" and appropriateness from a 'geographic location' lens;
- Identify existing geospatial data gaps, geospatial methodological and measurement issues;
- Consider how geospatial information can contribute to the indicators and metadata;
- Propose means of addressing data gaps and issues
- […]

Beyond 2017

[…] strategies for methodological work & provide guidance on the role of NSIs

Specific tasks for the UN-GGIM:Europe WG Data Integration

- Develop practical examples (best practice) on specific national implementations on how Geospatial Information can support in processes in achieving the SDGs and where the need shows to measure, monitor and mitigate challenges
- suggest links between communities: demographic, statistical and environmental data together with the Geospatial Location – ranging from the conceptual level to specific indicators.

Best-practice example: Land Cover Change Detection Service (LaVerDi) @ BKG

SUSTAINABLE DEVELOPMENT GOALS

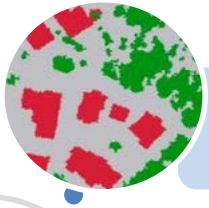
DESTATIS Statistisches Bundesamt

eurostat ec.europa.eu/eurostat

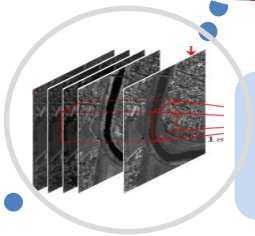
administration, decision makers, industry, …

all extracted information will be provided via WFS for statistical analysis over time

a special frontend with basic statistical analysis tools will be developed



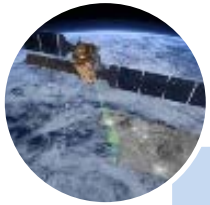
automatic derivation of change polygons for each available cloud free satellite image



automatic spatiotemporal analysis of land cover changes for defined feature based classes (e.g. water bodies (6.6.1), forest (15.1.1)

CODE-DE

using German Sentinel archive for data processing and analysis



Sentinel 2 satellite data

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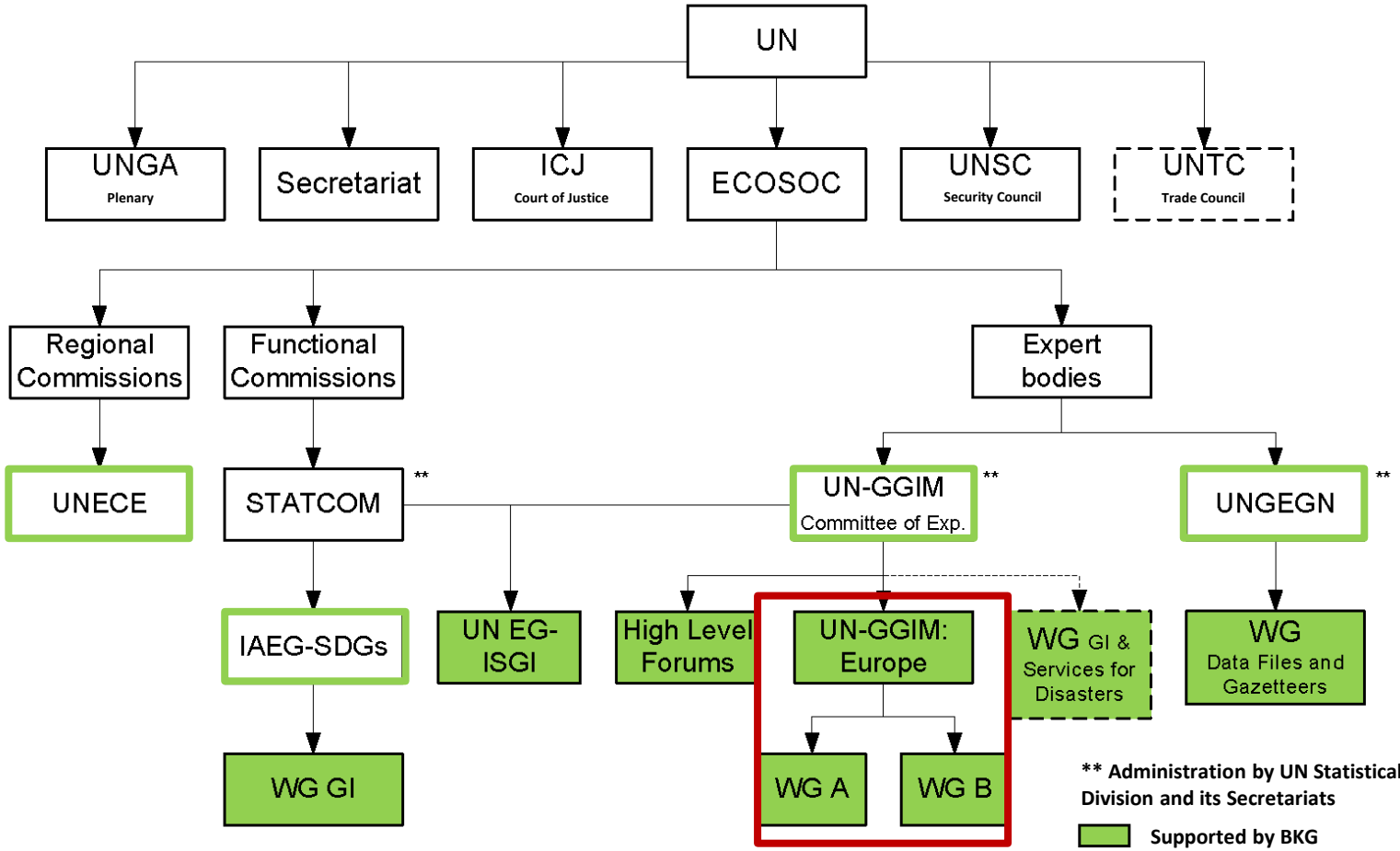
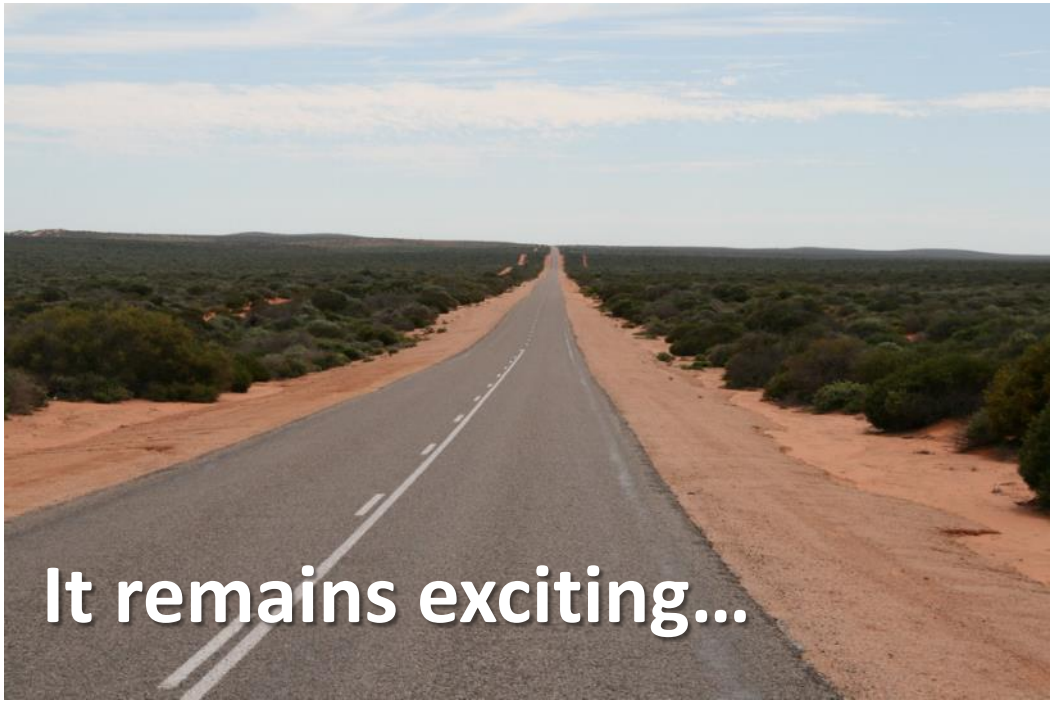
BKG's involvement --- many players/initiatives are on!



The national perspective…

- 1st SDG (Monitoring) 'Report of the German Federal Government to the High-Level Political Forum on SDGs' (July 2016)
- State Secretaries Committee steers the implementation of the strategy and oversees the updating of its content
- Committee comprises representatives from all federal ministries and is chaired by the Head of the Federal Chancellery
- National Sustainable Development Strategy has been adapted to the global UN SDG framework
- The Federal Statistical Office (FSO) is in charge of national SDG indicators monitoring, including reports on National Sustainable Development Strategy Indikators
- Cooperation efforts between FSO and BKG based on a 'Memorandum of Understanding (MoU)' (Nov 2016)

Thank you for your kind attention!



Chair: Prof. Hansjörg Kutterer
Contact: UN-GGIM: Europe, WG B „Data Integration“:
Pier-Giorgio Zaccheddu, „Technical Leader“
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